

Exhibit 6

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

**In re: WHIRLPOOL CORP.
FRONT LOADING WASHER
PRODUCTS LIABILITY LITIGATION**

1:08-wp-65000

MDL No. 2001

Class Action

Judge: James S. Gwin

EXPERT REBUTTAL REPORT OF PAUL M. TAYLOR

1. I am a Principal Engineer employed by Exponent, an engineering and scientific consulting firm located in Menlo Park, California. I hold the opinions expressed in this report to a reasonable degree of engineering certainty.

2. My curriculum vitae, billing rate, and testimony history have remained unchanged from the Expert Report I submitted in this matter on November 16, 2009. Exhibit A contains a listing of the materials I considered for this report that are in addition to those referred to in my November 16, 2009 report.

3. I make this report at the request of counsel of record for Whirlpool Corporation in this litigation. I was asked to review and comment on the reports submitted by Drs. David W. Griffin, R. Gary Wilson, and Richard L. Oliver in this matter.

4. For ease of reference, the term “Subject Washers” will be used to designate Whirlpool Duet, Duet HT, Duet Steam, Duet Sport, and Duet Sport HT front-load washers that are or were used in one or more of the 14 MDL states.¹

¹ The washers “at issue in this matter” include Whirlpool-brand Subject Washers being used in one of the 14 states for which the plaintiffs propose formation of state-wide classes, including AZ, CA, FL, IL, IN, MD, NC, NJ, NY,

Response To Dr. David W. Griffin's Report

5. Dr. David W. Griffin states that he was asked by Plaintiffs to examine information “about service calls made at the request of owners of the front-loading washing machine units at issue in this matter.”² David W. Griffin, Ph.D., prepared a report in which he claims to have counted, using databases provided to him in this matter, the number of unique Whirlpool and Whirlpool Horizon model washing machines that have had a “qualifying service call.”³ Dr. Griffin reports the counts he obtained using various populations and sub-populations of the datasets, each time comparing his results to those reported by Dr. Anthony Hardaway, an engineer at Whirlpool.⁴ Dr. Griffin then calculates the ratio of his counts to those of Dr. Hardaway. Dr. Griffin does not report any conclusion apart from these ratios. He also does not calculate the rate of occurrence of any type of reported problem in any Subject Washer model or platform or in any competitor’s washers.

6. The descriptions by Dr. Griffin and Dr. Hardaway of their respective analyses make it clear that Dr. Griffin and Dr. Hardaway searched different databases created from different sources of records. Dr. Hardaway stated in his affidavit that he used only Whirlpool service records and counted only Whirlpool-brand Access and Horizon washers.⁵ In contrast, Dr. Griffin used Sears service records, and for two of his analyses he added counts from Whirlpool’s “Siebel” customer contacts database.

7. If Dr. Griffin attempted to count “service calls” on “washing machine units at issue in this matter” (as he stated in his report), then he has made several major errors that render

OH and TX (Second Amended Complaint ¶ 107), plus GA, MA, and MI (*Cloer* Complaint ¶ 52), which I shall refer to in this report as the “MDL states.”

² Affidavit of David W. Griffin, Ph.D., November 16, 2009 (“Griffin Report”), ¶1-2.

³ Dr. Griffin defines a “qualifying service call” as a service call reflected in any service record containing at least one of Dr. Hardaway’s fourteen key text strings in the service description field(s). (Griffin Report ¶ 6).

⁴ Affidavit of Anthony H. Hardaway, August 19, 2008 (“Hardaway Affidavit”).

⁵ Hardaway Affidavit ¶ 33.

his counts, and any opinions based on those counts, unscientific and unreliable. For example, Dr. Griffin included in his analyses non-Whirlpool brand washers (*i.e.*, Kenmore-brand washers, which are not washer units “at issue in this matter”).⁶ Because the majority of washers in Dr. Griffin’s analyses are not “washing machine units at issue in this matter,” the raw counts he has produced dramatically overstate the numbers of putative class members who have complained to Whirlpool or Sears about the alleged “Mold Problems.”⁷ Dr. Griffin also used data from Whirlpool’s Siebel database, which is different from the Service Claims database that Dr. Hardaway used. Dr. Griffin’s report cannot and should not be used in any comparison with Dr. Hardaway’s affidavit because they are analyzing different populations of washers and using different databases.

8. I have attempted to reproduce the counting exercise performed by Dr. Griffin using the filters and fields he described in his report. My total counts differ from his total counts by about 1% (he counted 48,665 records, and I count 49,196 records – a difference of 531 records.) I have identified and quantified several errors and concerns with the analyses performed by Dr. Griffin for representing the complaint history of putative class members, including:

- (a) First, the two operative complaints in this litigation—the master MDL complaint and the *Cloer* complaint—identify the Subject Washers as Whirlpool-brand

⁶ Dr. Griffin had information that the washers “at issue in this matter” included only those Whirlpool-brand Subject Washers located in the MDL states, because his list of materials reviewed includes the plaintiffs’ Second Amended Complaint. (see Griffin Report, Attachment 3.) Thus, Dr. Griffin’s analysis should have included only Whirlpool-brand washers in MDL states.

⁷ Plaintiffs have defined, in their complaint, the term “Mold Problems” as: “(a) accumulate mold and mildew and/or residue or growth within the Washing Machines, (b) produce a moldy or mildewy odor that permeates the Washing Machines and/or consumers’ homes, (c) produce a mold or mildew odor on clothes and other items washed in the Machines, (d) fail to clean the Machines and remove moisture, residue, growth, and/or bacteria that lead to the formation of mold, mildew, and/or associated foul odors; and (e) be unusable in the manner, to the extent to, and for the purpose for which the Washing Machines were advertised, marketed, and sold.” Second Amended Master Class Action Complaint ¶ 2.

washers only. Dr. Griffin, however, included Kenmore-brand washers in his counts. As a result, his counts are not tied to the facts of this litigation and are misleadingly high. Approximately 57% of Dr. Griffin's "unique washing machine units" are actually Kenmore-brand washers.⁸ By my count, that would leave approximately 21,000 Whirlpool-branded washers in his counts. In other words, Dr. Griffin included in his counts more than 27,000 records that pertain to Kenmore-brand washing machines—*i.e.*, machines not "at issue in this matter."

(b) Second, Dr. Griffin did not limit his counts to washers within the 14 MDL states that Plaintiffs listed in their complaints in this litigation. I determined that approximately 35% of the 21,000 purportedly "unique washing machine units" that are Whirlpool-brand washers with a "qualifying service call" record pertain to machines that are not used in any of the 14 MDL states claimed by Plaintiffs to be "at issue in this matter." This error, too, misleadingly elevated what Dr. Griffin claimed to be a count of the relevant Whirlpool washers that had experienced a "qualifying service call." By applying this 14-state limitation, I determined that approximately 13,800 Whirlpool-brand washer records satisfied Dr. Griffin's "qualifying service call."

(c) Third, despite his claims to have eliminated duplicates, Dr. Griffin failed to eliminate most of the duplicate records for washers in the Siebel database.⁹ That is, for each of those washers that had more than one service call or customer contact record, he erroneously treated each service call as though it represented a separate, unique machine.

⁸ Dr. Griffin has defined a "qualifying service call" as any service record containing at least one of fourteen keywords. He defines his counts as "unique washing machine units." Griffin Report, p. 5.

⁹ In the Whirlpool databases, a "unique" machine can be identified by a combination of the model number and serial number. Dr. Griffin used a field called "ACCT_ROW_ID", which does not uniquely identify a washer (the same washer can have multiple "ACCT_ROW_ID" numbers.) The Sears database does not contain serial numbers for many appliance owners, so a "unique" machine is identifiable by a combination of the Sears customer number and item number. Dr. Griffin claimed to have used these identifiers for his Sears database analyses.

Approximately 14% of the Whirlpool-brand records that Dr. Griffin counted as unique washers are duplicate records for the same washing machine. Thus, of the approximately 13,800 records identified in paragraph 7(b) of the Griffin Report, approximately 1,900 records are duplicates that Dr. Griffin should have excluded from his counts, which would leave 11,898 service records. This error, too, elevated what he claimed to be a count of unique machines owned by members of the putative class that reportedly experienced a “qualifying service call.”

(d) Fourth, Dr. Griffin included service records with entries plainly showing that the supposedly “qualifying service call” was not, in fact, made to address one of the “Mold Problems” claimed by Plaintiffs.¹⁰ The keyword search performed by Dr. Griffin would catch records discussing odors that would be entirely unrelated to the “Mold Problems” alleged by Plaintiffs. Exponent performed a keyword search for “%burn%,” “%smok%,” and “%diesel%” in the 11,898 potentially relevant records. Exponent then reviewed all records containing one of these keywords to identify whether or not the “odor” referred to one of the “Mold Problems” alleged by Plaintiffs. If Dr. Griffin had made such an effort, he would have found, as I have, that approximately 4.4% of his records refer to an odor related only to smoke, burn or diesel and do not refer to any odor related to any of the alleged “Mold Problems.” Removing from Dr. Griffin’s count the Subject Washers with an odor related to smoke, burn, or diesel, and unrelated to the “Mold Problems” alleged by Plaintiffs, results in a new count of only 11,371 unique Subject Washers (10,632 from Siebel and 739 from Sears databases) out of the 48,665 claimed by Dr. Griffin. There are other records captured by the keyword search that do not reflect any of the “Mold Problems” alleged by Plaintiffs and that were not specifically

investigated, but would have the effect of reducing the counts still further. Thus, Dr. Griffin's claimed number of unique service calls that related to a potential "Mold Problem" was several times higher than the actual counts.

9. I have conducted my own independent analysis of the Whirlpool and Sears databases. In my analysis, I expanded the search terms used, and included an additional database and additional fields not used by Dr. Griffin, in an effort to be even more inclusive in locating records of the "Mold Problems" alleged by Plaintiffs. The description and results of that analysis are provided in Exhibit B. I determined that the total number of unique Whirlpool-brand washers used in the 14 MDL states that reportedly have experienced one or more of the alleged "Mold Problems" is approximately 15,459 units. If this analysis were not restricted to the 14 MDL states, but included the entire United States, the count of units would increase to 23,401, which represents about 0.86% of the approximately 2,720,000 Whirlpool-brand units shipped from mid-August 2001 through October 2008.¹¹

10. From my independent analysis, if database records are limited to those made during the first year of washer use, approximately 7,736 washers in the entire United States had a record potentially related to one of the "Mold Problems" alleged by Plaintiffs. The number of Whirlpool-brand washers shipped by Whirlpool and having been in service for at least one year is approximately 2,440,000, giving a nationwide one-year warranty rate of only about 0.32% for washers with a potential "Mold Problem" as alleged by Plaintiffs. For machines produced during the period 2001-2005, the percent of units with a reported "Mold Problem" in the first year is 0.44%; for washers produced during the period 2006-2008, however, the one-year warranty repair rate is 0.20%. The service histories of the units built before September 2005, on

¹¹ Whirlpool records include customer records through March 10, 2009, and Sears records include data through May 2009 for Horizon washers and through November 2008 for Access washers.

the one hand, and units built in or after September 2005 on the other, is a matter of substantial importance because the Whirlpool Access units produced in and after September 2005 have a “Clean Washer” or “maintenance” cycle programmed into the machines.¹² The Whirlpool Access units produced in and after September 2005 were accompanied by substantially revised Use and Care Guides that included detailed instructions to the user to run the Clean Washer or maintenance cycle once a month with chlorine bleach.¹³ Whirlpool-brand Duet Sport washers, built on a different platform (Horizon platform) started shipping in early 2006. All Whirlpool Horizon washers sold to consumers included a Clean Washer cycle on the control panel, as well as detailed instructions in the Use and Care Guides regarding how and when to use the Clean Washer cycle. When I restrict my first-year analysis to include only Whirlpool-brand washers in the 14 MDL states, the count of unique units with a potential “Mold Problem” drops to 5,191.¹⁴ Table 1 summarizes some of the results from my analyses.

¹² The clean washer cycle uses higher water volumes and increased mechanical action, in conjunction with warm water and chlorine bleach (or a specially designed washer cleaner such as Affresh) to clean the inside of the plastic tub and the surfaces of the stainless steel wash drum.

¹³ After Whirlpool introduced its Affresh Washer Cleaner product in September 2007, Whirlpool again revised its Use and Care Guides to instruct the user to run the Clean Washer cycle with either chlorine bleach or an Affresh tablet to remove or prevent the build-up of odor-causing residues in the washer.

¹⁴ Because Whirlpool generally does not sell appliances directly to consumers, its records do not always contain data on where its washers are used, so the base population of units in the 14 MDL states is not precisely known.

Table 1. Percentages of Whirlpool-brand front-load washers in the United States with and without a potential "Mold Problem" recorded within the first year of service

Whirlpool Brand Washers Year of Production	% of Washers Nationwide With a Record of a Reported "Mold Problem" in the First Year	% of Washers Nationwide With No Record of a Reported "Mold Problem" in the First Year
2001-2005	0.44%	99.56%
2006-2008	0.20%	99.80%
2001-2008	0.32%	99.68%

11. My 0.32% rate of a reported "Mold Problem" is similar to Dr. Hardaway's rate of 0.27%, especially considering that I used a more expansive search with more databases, more keywords and more fields searched.

Response To Dr. Richard Oliver's Report

12. Dr. Oliver submitted a report stating a variety of factors that he opined would cause customers not to report the "Mold Problems" alleged by Plaintiffs. Essentially, Dr. Oliver's report stated that more customers had "Mold Problems" than were captured in the Whirlpool and Sears databases. Dr. Oliver did not present any numbers to quantify by how much the data may undercount the actual counts for the Subject Washers, though he opined without citing any specific sources "the modal response to dissatisfaction is to 'do nothing' at a reporting rate of approximately 40%."¹⁵

13. I performed additional analyses to examine groups of customers that would have a substantial incentive, and no disincentive, to report the "Mold Problems" claimed by Plaintiffs, if any such problems existed in these customers' machines. The first of these analyses considered customers who had purchased Sears "Maintenance Agreements" or "Master Protection Agreements," which I will refer to as Sears extended service plans or "ESPs." These individuals

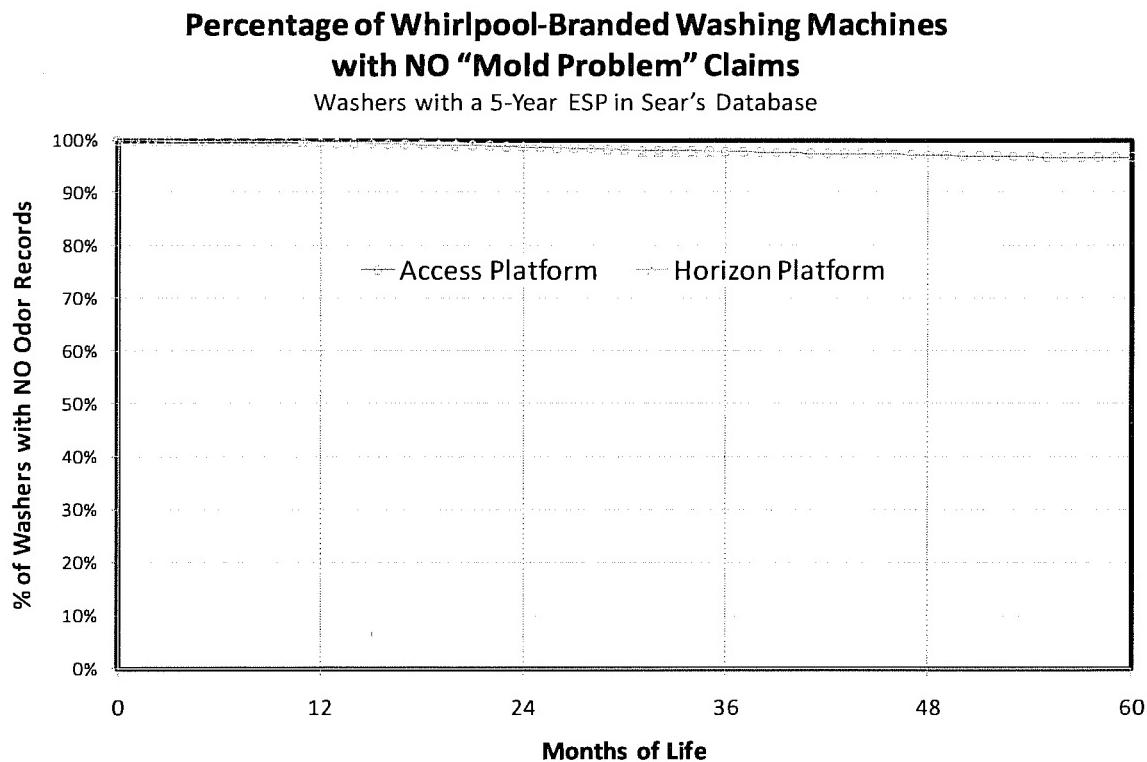
¹⁵ Rule 26 Report of Richard L. Oliver, Ph.D., Nov. 16, 2009, p. 4 ("Oliver Report").

had pre-paid Sears to address any problem with their washers during the period covered by the ESP. There was no financial disincentive to call Sears if the ESP owners had any problem of any kind, including “Mold Problems,” no matter how trivial the problem might be. ESPs typically extend the pre-paid service to either three or five years from the date of purchase, so these data allow evaluation of the performance of these washers for several years after the 1-year Whirlpool warranty expires. I reviewed the Sears data for customers who purchased ESPs for periods of five years from date of purchase. In my analysis, I factored into the calculation the fact that some of the washers covered by five-year ESPs have not yet experienced the full five years of life.¹⁶ I also added records of potential “Mold Problems” from the Whirlpool databases for these specific washers, if the specific records were not already included in the Sears database. Potential “Mold Problems” were identified by using the “mold” keyword search strategy described in **Exhibit B**, but without removing any records having “burn,” “smoke,” or “diesel.” The results of this evaluation are shown in Table 2 and Figure 1. The percentage of potential “Mold Problems” in the first year of life (0.43%) for Whirlpool washers with a Sears five-year ESP is marginally higher than the results from the combined datasets shown in Table 1 (0.32%). This is consistent with the expectation that owners who purchase an ESP are as likely or more likely to complain if they notice any “Mold Problem.” Note that the cumulative rate of “Mold Problem” complaints for ESP machines is less than 3.4% by the fifth year of life.

¹⁶ The Sears service data extend through November 2008 for Whirlpool Access platform washers and through May 2009 for Whirlpool Horizon platform washers. I used a Kaplan-Meier survival analysis to calculate the rates for different times in service.

Table 2. Percentages of Subject Washers sold by Sears, covered by a five-year ESP, and having no "Mold Problem" record

Months of Life	Whirlpool Access Platform Washers	Whirlpool Horizon Platform Washers	All Whirlpool Washers Combined
0-12	99.57%	99.60%	99.57%
13-24	98.62%	98.92%	98.66%
25-36	97.84%	97.78%	97.86%
37-48	97.12%		97.14%
49-60	96.69%		96.71%



Notes: Data from Sears databases for washers covered with a 5 year ESP in one of the 14 MDL states. Washers with a potential "Mold Problem", as alleged by Plaintiffs include washers with a record in the Sears database having at least one of the "mold" keywords. Whirlpool's Siebel and Claims databases were also searched for additional "mold" records for these washers, and added to the analysis when found.

Figure 1. Percentage of Whirlpool washers sold by Sears in an MDL state, covered by a five-year ESP, and having no "Mold Problem" record

14. My second analysis considered customers who called Sears to have a preventative maintenance check (“PM Check”). PM Checks are available free of charge, once a year, to customers who have bought an ESP, and include a variety of inspections and checks of the washer.¹⁷ The PM Check offers an ideal, no-incremental-cost opportunity for a customer with “Mold Problems” to mention such a problem because (a) the service technician is physically present at the washer, (b) the purpose of the visit is to check the washer for any defect or incipient problem, (c) informing the service technician during the time of the visit does not entail any additional cost or effort for the customer, (d) problems with the washer brought to the service technician’s attention may be covered under the ESP, and (e) the service technician has an incentive to tell the customer about any problem the service technician sees and that the customer has not seen, because the service technician will be reimbursed by the company for work performed to remedy the problem. Sears’ records of PM Checks performed on Subject Washers, while the washer was covered by an ESP, were analyzed, and those records with potential “Mold Problems” were identified. If a washer had more than one PM Check performed, it was coded as a potential “Mold Problem” if the records of any of the PM Checks indicated a potential “Mold Problem.” The results of the analysis are presented in Table 3 and Figure 2. As this analysis shows, the vast majority of Subject Washer owners who bought an ESP do not complain of a “Mold Problem,” even when a service technician is physically present inspecting the machine and repairs may be covered under the pre-paid ESP.

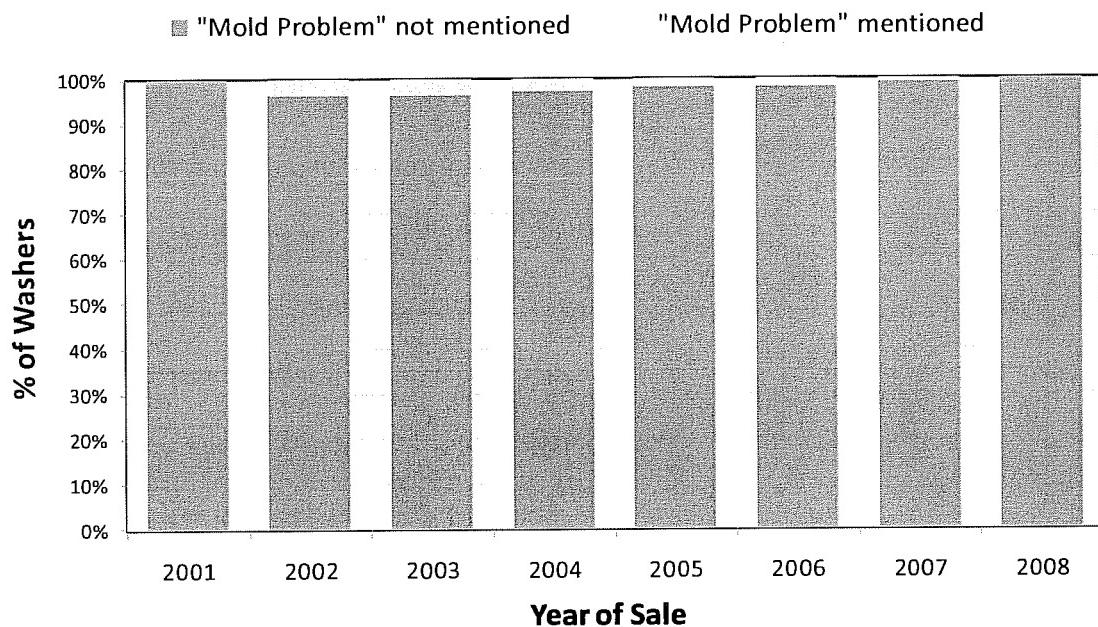
¹⁷ See information and materials available at http://www.sears.com/ue/home/pmc_laundry.pdf and http://www.sears.com/shc/s/nb_10153_12605_NB_ProtectionAgreements?adCell=AF.

Table 3. Percentage of PM Checks on Subject Washers covered by an ESP that had a potential "Mold Problem" during the PM Check

Year of Sale	Whirlpool Access Washers	Whirlpool Horizon Washers	All Whirlpool Washers Combined
2001	0.0%		0.0%
2002	3.6%		3.6%
2003	3.5%		3.5%
2004	2.8%		2.8%
2005	2.0%		2.0%
2006	1.9%	1.7%	1.8%
2007	1.4%	0.8%	1.0%
2008	0.0%	0.0%	0.0%
Total	2.7%	0.8%	2.4%

Preventative Maintenance Checks (PM Checks)

Percent of Washers with a Potential "Mold Problem" Mentioned During the PM Check
Whirlpool Brand Access and Horizon Washers covered by an ESP in an MDL state



Notes: Records coded as PM Check in Sears database for Subject Washers (Duet, Duet HT, Duet Steam, Duet Sport, Duet Sport HT in an MDL state), where the PM Check was performed while the washer was covered by an ESP. Potential "Mold Problem" records identified by keyword searches.

Figure 2. Percentage of PM Checks on Subject Washers covered by an ESP that had a potential "Mold Problem" recorded during the PM Check

Response To Dr. Gary Wilson's Report

15. Dr. Wilson opined:¹⁸

All of the areas mentioned in the last section represent design flaws resulting from the neglect of the fundamental principle that a cleaning appliance must be able to clean itself or at the very least provide a means where by the consumer can easily clean the washer.
(Underlining omitted.)

Dr. Wilson provided no reference or citation to support this opinion. Most importantly, he provided no basis for his assertion that it was a “fundamental principle” that cleaning appliances must be able to self-clean or provide a means whereby consumers can easily clean the appliance. As I show below in subsequent paragraphs, there is no such “fundamental principle” currently in practice for the front-load washer industry.

16. Dr. Wilson further opines:¹⁹

Within a matter of months and often only within a few weeks the ACCESS and HORIZON begin to produce an offensive order[sp] which not only emanates from the washer but also may permeate the clothes and towels that have been washed in the machine.

The straightforward reading of this opinion by Dr. Wilson is that all Access and Horizon washers will begin to develop an offensive odor within months or weeks. That conclusion is demonstrably wrong, however, as shown by customers who have not experienced odor problems after years of use, such as Ms. Shirley Hand. Ms. Hand purchased her Duet washing machine in July 2003.²⁰ She has stated that, in the more than six years she has owned her Duet, neither her washer nor the clothes washed in it have ever smelled of mold or mildew, even though she keeps the washer door closed

¹⁸ Wilson Report, pp. 9-10.

¹⁹ Ibid, page 8.

²⁰ Declaration of Shirley Hand, Nov. 24, 2009 (“Hand Declaration”).

between uses and does not run a monthly maintenance cycle.²¹ Ms. Hand is satisfied with the performance of her washer and stated: “I am a very happy owner of my Duet washer.”²²

17. The Whirlpool and Sears data analyses described earlier do not support Dr. Wilson’s opinion either. My analyses showing (a) the low overall rate of reported potential “Mold Problems” during the first year of life of the Subject Washers; (b) the first-year rate has decreased by more than 50% for units built with a “Clean Washer” cycle; (c) the low rates of “Mold Problem” complaints calculated using the PM Check data; and (d) the 5-year ESP analyses showing complaint rates at five years of life are still low, all refute Dr. Wilson’s opinion that Whirlpool Access and Horizon washers “uniformly” fail to self-clean, develop a “Biofilm,” and, “[w]ithin a matter of months and often only within a few weeks . . . produce an offensive odor.”²³

18. As will be discussed later in this report, Consumers Union has published rates of repairs and serious problems for various brands of front-load washers, including Whirlpool. These rates do not support Dr. Wilson’s opinion that Whirlpool Access and Horizon washers “uniformly” fail to self-clean, develop a “Biofilm,” and, “[w]ithin a matter of months and often only within a few weeks . . . produce an offensive odor.”

19. Dr. Wilson identifies several areas of the washer that he claims have design flaws: the plastic tub, the aluminum basket bracket, the sump area, the pump strainer and drain hose, and the rubber door gasket (sometimes referred to as the bellow, boot, or door seal).

20. The Use and Care Guides for the Subject Washers have at all times included specific cleaning instructions for the door gasket (called the “door seal” or “bellow” in the Use

²¹ Hand Declaration ¶¶ 8-9, 11-12.

²² Ibid, ¶ 14.

²³ Dr. R. Gary Wilson, Expert Report on Whirlpool Front-Load Washer, Nov. 16, 2009, p. 8.

and Care Guides). The instructions vary among the washers named in this litigation, but include wiping the door seal and checking the fold in the door seal for foreign objects.²⁴ The door seal is easily accessible to the consumer and can be cleaned of biofilm or other materials. Water that lands on the door seal can drain into the fold area of the seal, where drain holes allow the water to drain into the tub. Dr. Wilson has identified the fold and tub in this region as “prime collection points for Biofilm.”²⁵ This area is readily accessible to consumers, and consumers are instructed by the Guides to check this area. The consumer can easily clean this area.

21. The pump strainer is accessible by removing the front panel. This was done-by at least one of the named Plaintiffs, Shannon Schaeffer. The pump strainer volume is separated from the tub and drum volumes by a floating ball seal. The ball seal is closed except while the pump is running. The effect of this design is to allow fluids to flow only from the tub to the pump strainer, and not the reverse. While the machine is idle, these two volumes are separate and do not interact. Should a biofilm develop on the pump strainer, it would be under water; any odors or emissions that were not absorbed by the water would be blocked from entering the drum or tub by the ball seal. The drain hose, being on the outlet side of the pump, also is unlikely to cause problems within the washer drum or tub, because any odors or emissions produced within that tube would need to penetrate both the floating ball seal and a standing volume of water that would act as a water seal.

22. The plastic tub, aluminum basket bracket, and sump areas are not directly accessible to consumers. These areas can be cleaned, however, by using maintenance cycles with

²⁴ Washers owned by Plaintiffs Gardner, Schaeffer, and O’Brien, and the older washers of Plaintiff Sandholm-Pound, have Use and Care Guide instructions to use a soft damp cloth or sponge when necessary to clean the door seal, and to check the fold of the seal periodically for any foreign objects. Plaintiffs Glennon, Glazer, and Sandholm-Pound (for her newest washer) have more detailed instructions, including instructions to wipe the seal areas with a dilute solution of chlorine bleach, let it stand for five minutes, wipe it down with a dry cloth, and let the washer interior air dry with the door open.

²⁵ Wilson Report, p. 9.

bleach or a washer cleaner, such as Affresh. In addition, the design and operation of the Subject Washers are not all the same.

23. All Whirlpool Horizon washers (Duet Sport and Duet Sport HT models) have a “Clean Washer” cycle dedicated to cleaning the drum, tub, and sump area. The Use and Care Guide for Plaintiff Glazer’s washer, under the section “Clean Washer,” states:²⁶

Use the Clean Washer cycle once a month to keep the inside of your washer fresh and clean. This cycle uses a higher water level in combination with liquid chlorine bleach to thoroughly clean the inside of your washing machine. See “Cleaning Your Washer.”

A later section of this guide entitled “WASHER CARE,” under the subsection “Washer Maintenance Procedure,” states:²⁷

This washer has a special cycle that uses higher water volumes in combination with liquid chlorine bleach to thoroughly clean the inside of the washer.

A few pages later, in a section entitled “TROUBLESHOOTING,” under the subsection “Washer Odor,” the Use and Care Guide states:²⁸

Have you run the Clean Washer Cycle lately?

To freshen your washer and to avoid odors, see “Cleaning Your Washer.”

24. In approximately September 2005, Whirlpool added a maintenance cycle to all Access washers (both Whirlpool and Kenmore brands).)As discussed in the following paragraph, in 2006, Whirlpool added a Clean Washer cycle to the dial on the control panel.) The Use and Care Guide published in August 2005, in the section entitled “Cleaning Your Washer,” has the following instructions regarding the original maintenance cycle in Access washers:²⁹

Washer Cleaning and Monthly Maintenance Procedure

²⁶ Whirlpool Duet Sport Front-Loading Automatic Washer Use & Care Guide, 8540910A, 1/06, page 15.

²⁷ Ibid, page 20.

²⁸ Ibid, page 23.

²⁹ Whirlpool Duet Front-Loading Automatic Washer Use and Care Guide, 461970226801, 8182674, 8/05, page 18.

Your washer has a special cycle stored within the machine's programming. Pressing a specific combination of buttons will access this cleaning cycle. This cycle uses higher water volumes in combination with liquid chlorine bleach to thoroughly clean the inside of your washing machine.

Later, in the section entitled "TROUBLESHOOTING," in the subsection "Washer odor," the Guide instructs the reader to look at the section "Cleaning Your Washer."³⁰

25. Later versions of the Whirlpool Access washers have a dedicated "Clean Washer" cycle on the cycle selector dial. The Use and Care Guide for Mr. Glennon's washer, in the section entitled "Cycles," in the subsection "Clean Washer," states:³¹

Use the Clean Washer cycle once a month to keep the inside of your washer fresh and clean. This cycle uses a higher water level in combination with liquid chlorine bleach to thoroughly clean the inside of your washing machine. This cycle takes approximately 50 minutes to complete and should not be interrupted. See "Cleaning Your Washer."

The Guide also has information on the Clean Washer cycle, in the two separate sections respectively entitled "Cleaning Your Washer" and "Troubleshooting," with language similar to that cited previously for the Horizon and Access washers.³²

26. The Duet Steam washers have yet another feature for cleaning the tub and drum. The Use and Care Guide for the Duet Steam washer currently installed in Ms. Sandholm-Pound's primary residence, in the section entitled "FEATURES AND BENEFITS," in the subsection "Clean Washer Cycle with Steam," describes this steam cleaning functionality:³³

This cycle uses steam to raise the temperature of the washer and makes the washer self-cleaning, flushing the machine's interior free of dirt and other residue. The use of AFFRESH™ washer cleaner or liquid chlorine bleach with this cycle, will remove and help avoid odor-causing residue.

³⁰ Ibid, page 21.

³¹ Whirlpool Duet Front-Loading Automatic Washer Use and Care Guide, 461970236271, 8183090, 10/06, page 15.

³² Ibid, pp. 18, 21.

³³ Whirlpool Duet Steam Front-Loading Automatic Washer Use and Care Guide, 461970240782 / W10158196B, 8/08, p. 10.

The Duet Steam washers also have a Clean Washer Reminder light that illuminates every 30 cycles to remind the customer to run the Clean Washer cycle.³⁴ The Use and Care Guide, in the section titled “Cleaning Your Washer,” in the subsection “Always do the following to maintain washer freshness,” states:³⁵

Repeat the cleaning procedure monthly or when the CLEAN WASHER REMINDER light illuminates.

27. For Whirlpool Access washers built before Clean Washer cycles were specifically added to the dial, customers who experienced an odor problem and who contacted Whirlpool would be instructed to manually run a maintenance cycle. For example, Maggie O’Brien contacted Whirlpool by e-mail and received e-mailed instructions, as well as oral and written instructions from a Whirlpool-authorized service technician, to clean the door seal, use HE detergent, leave the door ajar between uses, and to run maintenance cycles.³⁶

28. According to his report, Dr. Wilson did not evaluate the “Clean Washer” cycles on the Subject Washers:³⁷

In addition, consumer instructions for cleaning processes and special cleaning cycles have been added to the washers. Whirlpool has also made special cleaning tablets available. The effectiveness of these changes have not been evaluated.

Dr. Wilson did not elaborate on the basis for his opinion that “a cleaning appliance must be able to clean itself or at the very least provide a means where by the consumer can easily clean the washer.” This is significant because he admits that he did not evaluate the effectiveness of the “Clean Washer” or cleaning cycles present on the Whirlpool Horizon and post-September 2005

³⁴ Ibid, pp. 14, 16.

³⁵ Ibid, pp. 19.

³⁶ Exhibits OBR 9 and OBR 10 to the deposition of Maggie O’Brien, June 9, 2009.

³⁷ Wilson Report, page 10.

Access washers. He also did not evaluate the effectiveness of the monthly maintenance cycle recommended for owners who reported a problem with a pre-September 2005 Access Washer.

29. Dr. Wilson opines that it is a “fundamental principal” that cleaning appliances (*e.g.*, clothes washers) need to clean themselves, or at the very least be easy to clean by the consumer. Let us first consider Dr. Wilson’s opinion that washers need to clean themselves.

30. The Subject Washers were produced and sold starting in 2001. Use and Care Guides or their equivalent (“Guides”) were obtained from online sources for a variety of front-loading washing machines sold by major competitive manufacturers in the United States from that time period forward. A listing of the manufacturers, year of publication of the Guide, and washer model numbers is shown in Table 4.

Table 4. Listing of manufacturers and publication years of Guides of front-load washers

Pub. Year	Bosch	Frigidaire	GE	LG	Miele	Samsung
2003				WM2432HW/ 2032HS, HW/ 1832CW		
2004				WM1812CW /1814CW	W1065	P805J/P803J /P801
2005	WFMC4300 (Nexxt DLX)	GLEH1642		WM2277H* /2077CW /2075CW		
2006	WFMC4301 (Nexxt DLX)	GLTR1670F		WM2487H		WF306LAW
2007	WFMC8400- 01 (Nexxt 800)		WPDH8800/ GPDH8800	WM2455H	W1113	WF337A
2008		ATF7000FE	WPDH8850/ 8900		W4800	WF338
2009	Vision 300/500/DLX	FAFW3577	WPDH8850/ 8900/8910	WM2501H	W3035	WF419AAW

31. The Guides were reviewed for information and instruction on several topics:
 - a. Manual cleaning of different components, such as the door seal and soap dispenser;
 - b. Maintenance cycle, including whether the machine has a dedicated cleaning cycle or uses an existing cycle, and how that cycle is activated;
 - c. Steps to take if an undesirable odor is detected;
 - d. The use of HE detergent; and
 - e. Keeping the front door open or ajar between uses.
32. Results of the Use and Care Guide analyses show that:
 - a. All manufacturers have consistently discussed means by which owners can and should manually clean—that is, not self-cleaning—different components, such as the door seal and soap dispenser (see Table 5).
 - b. Starting in 2005, Whirlpool added a specific cycle designed to clean the interior of their washing machines and instructed owners to run this cycle on a regular schedule. LG added a “Tub Clean” cycle in 2005. Starting in 2005, Bosch recommended that users run a regular cycle with hot water and bleach every three months. In 2007, GE recommended that users run a “Basket Clean Cycle” at least once a month with bleach or other commercially available product manufactured for this purpose.³⁸ Samsung, in 2006 only, described their “SilverCare™” option that they recommend once a week to avoid odors. Miele, starting in 2007, suggested running a “maintenance cycle” once a month. Frigidaire, starting in 2009, recommended using their “System Clean Cycle” once a

³⁸ The earliest GE manual I found was dated 2007.

month with either a cup of liquid bleach or Tide® Washing Machine Cleaner, followed by an Extra Rinse cycle in order to clear any residual bleach.

- c. Washer odors were discussed starting in about 2005 by Whirlpool. Odors were mentioned by LG and Samsung starting in 2006, by Miele starting in 2007, and by Frigidaire starting in 2008. Odors were mentioned in 2007 and later manuals for GE. Bosch does not mention undesirable odors.
- d. Whirlpool changed from recommending HE detergent to requiring HE detergent in about 2005, as did LG. Samsung started requiring HE detergent in 2006, Miele in 2007, and Frigidaire in 2008. GE required HE detergent in 2007 and later. Bosch recommended HE detergent for optimum performance.

Table 5. Table comparing manual cleaning of components by different manufacturers of front load washers

Manual Cleaning of Components						
Pub Year	Bosch	Frigidaire	GE	LG	Miele	Samsung
2003				Remove and clean detergent dispenser with water only. Dry around washer door opening, flexible gasket, and door glass.		Wipe inner door with mild soap and water and door seal with cloth or sponge when necessary. Check fold of seal for foreign objects. Remove and rinse detergent dispenser and inserts under running water.
2004			Remove and rinse dispenser drawer and inserts with hot tap water. Dry around door opening, basket, and glass. Wipe dirty residue off drum and vanes with nonabrasive household cleaner.	Remove and clean detergent dispenser with water only. Dry around washer door opening, flexible gasket, and door glass.	The casing and drum door can be cleaned with soap and water or a mild non-abrasive detergent, and wiped dry. Remove and rinse the detergent dispenser with warm water.	Inspect and clean door seal with bleach and warm water if stains are found on seal. Remove and rinse detergent dispenser and inserts under running water.
2005	Clean rust spots on drum with chlorine-free agent and clean residual detergent from detergent dispenser by removing and rinsing under running water.	Remove and rinse dispenser drawer and inserts with hot tap water. Dry around door opening, basket, and glass. Wipe dirty residue off drum and vanes with nonabrasive household cleaner.	Remove and clean detergent dispenser with water only. Dry around washer door opening, flexible gasket, and door glass.	Remove and clean detergent dispenser with water only. Dry around washer door opening, flexible gasket, and door glass.	Clean interior of washer to remove dirt, soil, odor, mold, mildew, or bacterial residue. Remove and wash detergent dispenser under running water.	Inspect and clean door seal with bleach and warm water if stains are found on seal. Remove and rinse detergent dispenser and inserts under running water.
2006	Clean rust spots on drum with chlorine-free agent and clean residual detergent from detergent dispenser by removing and rinsing under running water.	Remove and rinse dispenser drawer and inserts with hot tap water. Dry around door opening, basket, and glass. Wipe dirty residue off drum and vanes with nonabrasive household cleaner.	Dry around door opening, gasket, and glass. Clean out foreign objects from door basket, and ensure that nothing is blocking the holes behind the gasket. Remove and rinse detergent drawer and inserts with hot water once or twice a month.	Remove and clean detergent dispenser with water only. Dry around washer door opening, gasket, and door glass.	Clean the drum with stainless steel cleaner. Remove and clean detergent dispenser with warm water.	Clean interior of washer to remove dirt, soil, odor, mold, mildew, or bacterial residue. Remove and wash detergent dispenser under running water.
2007	Clean rust spots on drum with chlorine-free agent and clean residual detergent from detergent dispenser by removing and rinsing under running water.	Remove and rinse dispenser drawer and inserts with hot tap water. Dry around door opening, basket, and glass. Wipe dirty residue off drum and vanes with nonabrasive household cleaner. Periodically, wipe dry the folds in the flexible basket to remove lint and other debris.	Dry around door opening, gasket, and glass. Clean out foreign objects from door basket, and ensure that nothing is blocking the holes behind the gasket. Remove and rinse detergent drawer and inserts with hot water once or twice a month.	Remove and clean detergent dispenser with water only. Dry around washer door opening, gasket, and door glass.	Clean the drum with stainless steel cleaner. Remove and clean detergent dispenser with warm water.	Clean interior of washer to remove dirt, soil, odor, mold, mildew, or bacterial residue. Remove and wash detergent dispenser under running water.
2008	Clean rust spots on drum with chlorine-free agent and clean residual detergent from detergent dispenser by removing and rinsing under running water. Wipe water and residue from door gasket because "mold or odor issues can result"	Remove and rinse dispenser drawer and inserts with hot tap water and bleach. If mold or mildew stains found in gasket, scrub with Comet Spray Gel Mildew Stain Remover.	Dry around door opening, gasket, and glass. Clean out foreign objects from door basket, and ensure that nothing is blocking the holes behind the gasket. Remove and rinse detergent drawer and inserts with hot water once or twice a month.	Clean detergent dispenser with water only. Dry around washer door opening, gasket, and door glass. To remove stain in door seal, use bleach and warm/hot water to wipe down the basket.	Clean the drum with stainless steel cleaner. Remove and clean detergent dispenser with warm water.	Clean interior of washer to remove dirt, soil, odor, mold, mildew, or bacterial residue. Remove and wash detergent dispenser under running water.
2009						Inspect and clean door seal with bleach and warm water if stains are found on seal. Remove and rinse detergent dispenser and inserts under running water.

e. Whirlpool added instructions on leaving the front door open or ajar starting in 2005, as did Bosch. LG added instructions for leaving the door open or ajar after the “Tub Clean” cycle starting in 2005. GE started providing such instructions in its 2007 manual. Miele and Samsung have no such instruction. In 2008, Frigidaire stated that the door should be left closed, but in 2009 began recommending that the door be left open for a few hours to help prevent odors, mold, or mildew.

33. These analyses of cleaning requirements for front-loading washers sold in the U.S. show that manually cleaning the washer (by the consumer) is an integral part of user maintenance. Some components of all of these washers require the owners to perform some cleaning action. Most of these washers have added a special maintenance cycle to clean the drum and tub, with state-of-the-art special-purpose cleaning cycles having been introduced by Whirlpool and LG in 2005. Other manufacturers without a special cycle or option discuss running some form of cleaning cycle on a regular basis, typically with bleach, Affresh, or other washer cleaner products.

34. The washing machine industry expects consumers to clean parts of their washers. As time has progressed, manufacturers have added pre-programmed cleaning cycles to their washers or have added user instructions to their Guides for customers to run regular maintenance cycles, or both (as in the case of Whirlpool). Thus, rather than implementing a “fundamental principal” that washers clean themselves, the industry has moved in the opposite direction, instructing customers periodically to take modest actions to clean their washers.

35. The suggestions and requirements provided by Whirlpool are comparable to peer washing machines in the industry. Whirlpool does not appear to require more cleaning or maintenance of their front-loading washers than other manufacturers.

36. Dr. Wilson also opined that, at the very least, a means whereby the consumer can easily clean the washer should be provided. The cleaning efforts required are not difficult for the consumer—namely, wiping the seal, washing the removable soap dispenser, and running a clean cycle with bleach or Affresh. Indeed, the use of the Clean Washer cycles, or even a regular cycle (such as the “Whitest Whites” cycle) with bleach or Affresh allow customers to clean their washers. These cycles, along with the other suggestions or requirements, allow the consumer to prevent or control mold or odor issues.

37. In his report, Dr. Wilson opined that the Subject Washers uniformly fail to self-clean, which leads to the development of a biofilm that eventually produces an odor in the washer within weeks or months, and that may permeate clothing or towels washed in the machine.³⁹ My data analyses discussed above and in **Exhibit B** show that Dr. Wilson dramatically overstate the incidence of the alleged Mold Problems experienced by the putative class members.

38. As a further check or cross-reference on my data analyses, I also researched and evaluated the repair history surveys for front-loading washing machines that are published in *Consumer Reports* by Consumers Union (CU) each year. CU is a non-profit organization that provides an independent analysis on the performance of consumer products.⁴⁰ For many years,

³⁹ Wilson Report, page 8.

⁴⁰ On their website, <http://www.consumersunion.org/about/>, Consumers Union states: “Consumers Union (CU) is an expert, independent, nonprofit organization whose mission is to work for a fair, just, and safe marketplace for all consumers and to empower consumers to protect themselves. The organization was founded in 1936 when advertising first flooded the mass media. Consumers lacked a reliable source of information they could depend on to help them distinguish hype from fact and good products from bad ones. Since then CU has filled that vacuum with a broad range of consumer information. To maintain its independence and impartiality, CU accepts no outside

CU has annually surveyed consumers on the repair histories of their appliances, and analyzed and compiled the results. Responding consumers who were not satisfied with the performance of a product had the opportunity to express those opinions in these surveys; thus these surveys represent another set of data that is useful for looking at rates of repairs and serious problems of Whirlpool front-load washers. CUs published repair histories confirm that only small fractions of Whirlpool-brand front-loading washers reportedly have experienced “Mold Problems,” much less the “severe” odor problems claimed by Dr. Wilson.

39. In its February 2005 issue, for example, CU published its “Brand repair history” for front-loading washers.⁴¹ The results showed “the percentage of full-sized washers and dryers that have ever been repaired or had a serious problem,” and were based on 101,775 washers purchased new between 2000 and the first half of 2004.⁴² All brands of front-loading washing machines sold in the U.S. at that time experienced some rate of “repairs and serious problems,” with the range between approximately 9% and approximately 19%. The first generation of Whirlpool-brand front loaders, which were manufactured starting in late 2001, had only about a 12% rate of repairs and serious problems.⁴³ (For reference purposes, Whirlpool-brand top load washers had a rate of repairs of about 10%.) The article also points out that some readers have reported that their front-loading washers developed mold or a musty smell.⁴⁴ Consequently, some of the 12% rate of repairs and serious problems might have been associated with customers complaining of mold or a musty smell.

advertising and no free samples and employs several hundred mystery shoppers and technical experts to buy and test the products it evaluates.”

⁴¹ See “Washer & Dryer Update: A new spin,” *Consumer Reports* (February 2005), page 43.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Ibid., page 42.

40. Similarly, the March 2006 issue of *Consumer Reports* published CU's "Brand repair history" for washers bought new between 2001 and 2005.⁴⁵ The repair/serious-problem rates for front-loaders ranged between 9% and 21%, with Whirlpool-brand front loaders having only a 9% repair/serious-problem rate.⁴⁶

41. The January 2007 issue of *Consumer Reports* published CU's "Brand repair history" for new washers bought between 2002 and 2006.⁴⁷ The repair/serious-problem rates for front-loaders ranged between approximately 9% and approximately 19%, with Whirlpool-brand machines again having the lowest rate at 9%.⁴⁸

42. The February 2008 issue of *Consumer Reports* published CU's "Brand repair history" based on more than 113,000 new washers bought between 2003 and 2007.⁴⁹ The repair/serious-problem rates for front-loaders ranged between approximately 9% and approximately 17%, with Whirlpool-brand machines again having the lowest rate at 9%.⁵⁰

43. The February 2009 issue of *Consumer Reports* published CU's "Brand repair history" for new washers bought between 2004 and 2008.⁵¹ The repair/serious-problem rates for front-loaders ranged between approximately 10% and approximately 14%, with Whirlpool-brand machines having a 10% rate.⁵²

44. Thus, external and publicly available repair data from an independent source confirm what Whirlpool's and Sears' internal data show that the vast majority of Whirlpool-

⁴⁵ "Washers & Dryers: Savings at a price," *Consumer Reports* (March 2006), pages 43-45.

⁴⁶ *Ibid.*, page 45.

⁴⁷ "Washers & Dryers: Cycles of change," *Consumer Reports* (January 2007), pages 39-41.

⁴⁸ *Ibid.*, page 41.

⁴⁹ "Washers & Dryers: Performance for less," *Consumer Reports* (February 2008), pages 45-47.

⁵⁰ *Ibid.*, page 47.

⁵¹ "Washers: We find CR Best Buys for as little as \$400," *Consumer Reports* (February 2009), pages 46-48. This same article reported that "almost one-fifth of repairs to Maytag front-loaders bought in the last four years was due to mold, though all front-loaders had some mold problems." *Ibid.*, page 46.

⁵² *Ibid.*, page 48.

brand front-loading washer owners have not complained of the “Mold Problems” alleged by Plaintiffs in this case.

Conclusions

45. Only a small percentage of owners of Subject Washers have complained of the “Mold Problems” alleged by Plaintiffs. The vast majority of Subject Washer owners have not reported “Mold Problems,” even after years of owning Subject Washers. Even when a service technician is at the house of a Subject Washer owner with an extended service plan, inspecting their machine for performance and potential problems, and even when the repairs will cost the ESP owner nothing, the vast majority of such consumers do not mention any of the “Mold Problems” claimed by Plaintiffs.

46. If Dr. Griffin attempted to count “service calls” on “washing machine units at issue in this matter,” as he claimed to do in his report, then Dr. Griffin has made several major errors that render his counts, and any opinions based on those counts, unscientific and unreliable. Because the majority of washers in Dr. Griffin’s analyses are not “washing machine units at issue in this matter,” the raw counts he produced dramatically overstate the numbers of putative class members who have complained to Whirlpool or Sears about the alleged “Mold Problems.” Dr. Griffin’s report also cannot and should not be used in any comparison with Dr. Hardaway’s affidavit because they are analyzing different populations of washers and using different databases. Thus, Dr. Griffin’s comparative analysis is also unscientific and unreliable.

47. Dr. Oliver did not quantify the rate of under-reporting of alleged “Mold Problems” by Plaintiffs. He stated in his report: “past claims history is neither a proxy for, nor predictive of, either actual dissatisfaction rates or future dissatisfaction rates.”⁵³ However, the Sears warranty analyses contradicts this opinion. The 5-year ESP analyses, which included only

⁵³ Oliver Report, p. 4.

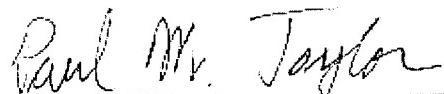
populations of owners who have pre-paid to have any problems corrected for a period of five years, shows that these customers complained about potential “Mold Problems” at an overall rate of 0.43% in the first year, which is marginally higher than the first year rate of 0.32% found when looking at all customers. Dr. Oliver’s opinion is also contradicted by the PM Check analysis. With PM Checks, customers have already requested that a technician come to check how their washers perform, the service technician is physically present at the washer, and any repairs found would potentially be covered under the ESP. The PM Check data can be compared to the 5-year ESP data. For example, washers sold in 2007 would have about one to two years of service. The PM Check rates of complaints for potential “Mold Problems” for washers sold in 2007 are 1.4% and 0.8% for Access and Horizon washers, respectively. The rates from the 5-year ESP analysis for 13-24 months in service are 1.38% and 1.08% for Access and Horizon washers respectively, which closely match the rates from the PM Check. No matter which available source of actual field data are consulted and analyzed, the data show that only a small fraction of the Subject Washer owners have experienced any noticeable or objectionable “Mold Problems.” The 5-year ESP data show that with each year of service, the percentage of washers with newly reported “Mold Problems” declines over time (see Table 2).

48. No manufacturer of front-loading washers in the U.S. market has provided any indication, of which I am aware, that it expects its washers to be self-cleaning. To the contrary, the industry has added cleaning features and instructions for consumers to perform cleaning functions.

49. Dr. Wilson’s opinion that all Whirlpool Access and Horizon washers “uniformly” fail to self-clean, develop a “Biofilm,” and, “[w]ithin a matter of months and often only within a

few weeks . . . produce an offensive odor⁵⁴ is flawed and contradicted by the available evidence. Furthermore, Dr. Wilson admits that he did not evaluate the effectiveness of the Subject Washers' Clean Washer or maintenance cycles and other recommended cleaning procedures. Whirlpool's Clean Washer and recommended maintenance cycles and other recommended cleaning procedures, at the very least, provide a means whereby the consumer can easily clean the washer and allow the consumer to prevent or control mold or odor issues.

Signed this 16th day of December, 2009.



Paul M. Taylor, Ph.D., P.E.

⁵⁴ Dr. R. Gary Wilson, Expert Report on Whirlpool Front-Load Washer, Nov. 16, 2009, p. 8.

EXHIBIT A: SUPPLEMENTAL LIST OF MATERIALS REVIEWED

Reports, Declarations, Affidavits in re: Whirlpool Corporation Front Loading Washer Products Liability Litigation, MDL No. 2001, U.S.D.C. Northern District of Ohio, Eastern Division

Affidavit of David W. Griffin, Ph.D., November 16, 2009

Expert Report on Whirlpool Front-Loading Washer, Dr. R. Gary Wilson, Ph.D., P.E., November 16, 2009

Rule 26 Report of Richard L. Oliver, Ph.D., November 16, 2009

Declaration of Ericka Englert, 8/31/09

Declaration of Shirley Hand, November 24, 2009

Pleadings

Class Action Complaint, Cloer et al. v. Whirlpool Corporation, MDL No. 2001, 1:09-wp-65005-JG, U.S.D.C. Northern District of Ohio, Eastern Division, Filed October 13, 2009

Product Literature:

Bosch Nexxt™ DLX™ Washer Operating, Care and Installation Instructions, Model WFMC 4300UC, June 2005

Bosch Nexxt® DLX Series Washer Operating, Care and Installation Instructions, Model WFMC4301UC, Rev. A., May 2006

Bosch Nexxt® 800 Series Washer Operating, Care and Installation Instructions, Models WFMC8400UC, WFMC8401UC, April 2007

Bosch Vision™ 300/500/DLX Series Clothes Washers Operating, Care and Installation Instructions, June 2009

Frigidaire, *Owner's Guide: Tumble Action Laundry Center*, Model GLEH1642DS1, December 2005

Frigidaire, *Tumble Action Washer Use & Care Guide*, Model GLTR1670, November 2006

Frigidaire, *Tumble Action Washer Use & Care Guide*, Model ATF7000FE, May 2008

Frigidaire, *All About the Use & Care of Your Washer*, Model FAFW3577, February 2009

General Electric Profile Washers *Owner's Manual & Installation Instructions*, Models WPDH8800, GPDH8800, December 2007

General Electric Profile Washers *Owner's Manual & Installation Instructions*, Models WPDH8850, WPDH8900, June 2008

General Electric Profile Washers *Owner's Manual and Installation Instructions*, Models WPDH8850, WPDH8910, WPDH8900, May 2009

LG: *Owner's Manual, Washing Machine*, Models WM2432HW, WM2032HS, WM2032HW, WM1832CW, January 2003

LG: *Washing Machine Owner's Manual*, Models WM1812CW, WM1814CW, August 2004

LG: *Owner's Manual, Washing Machine*, Models WM2277H*, WM2077CW, WM2075CW, December 2005

LG: *Owner's Manual, Washing Machine*, Model WM2487H*M, September 2006

LG: Tromm™ Washing Machine, *User's Guide & Installation Instructions*, Model WM2455H*, October 2007
LG: Steam Washer™, *User's Guide & Installation Instructions*, Model WM2501H*A, July 2009
Miele, *Operating Instructions for the W 1065 Automatic Washing Machine*, January 2004
Miele, *Operating and Installation Instructions, Washer W 1113*, November 2007
Miele, *Operating and Installation Instructions, Washer W 4800*, October 2008
Miele, *Operating and Installation Instructions, Washer W 3035*, February 2009
Samsung, *Washing Machine Owner's Instructions*, Models P805J, P803J, P801, May 2004
Samsung, *SilverCare™ Washer Owner's Manual*, March 2006
Samsung, *Washing Machine User Manual*, Model WF337A, August 2007
Samsung, *Washing Machine User Manual*, Model WF338*, March 2008
Samsung, *Washing Machine User Manual*, Model WF419AAW, February 2009
Whirlpool, *Duet® HT Front-Loading Automatic Washer Use & Care Guide*, October 2003
Whirlpool, *Duet® Front-Loading Automatic Washer Use & Care Guide*, April 2004
Whirlpool, *Duet® Front-Loading Automatic Washer Use & Care Guide*, August 2005
Whirlpool, *Duet® Front-Loading Automatic Washer Use & Care Guide*, October 2006
Whirlpool, *Duet® Front-Loading Automatic Washer Use & Care Guide*, August 2008
Whirlpool, *Duet® Front-Loading Automatic Washer Use & Care Guide*, June 2009

Miscellaneous

Consumers Union. "Washer & Dryer Update – A New Spin," Consumer Reports, February 2005: 42-44
Consumers Union. "Washers & Dryers – Savings at a Price," Consumer Reports, March 2006: 43-47
Consumers Union. "Washer & Dryers – Cycles of Change," Consumer Reports, January 2007: 39-42
Consumers Union. "Washers & Dryers – Performance for Less," Consumer Reports, February 2008: 45-48
Consumers Union. "Washers – We Find CR Best Buys for As Little as \$400," Consumer Reports, February 2009: 46-48
Consumers Union, "About Consumers Union," <http://www.consumersunion.org./about>, 12/15/09
www.sears.com, "Preventative Maintenance Checklist", March 14, 2003
www.sears.com, "Protection Agreements", 2009

EXHIBIT B: Exponent's Analyses of Whirlpool and Sears Databases



149 Commonwealth Dr.
Menlo Park, CA 94025

Technical Memorandum
December 2009

Exponent's Analyses of Whirlpool and Sears Databases

Database Descriptions

In response to the expert reports of Dr. Gary Wilson and Dr. David Griffin opining on the scope of the “Mold Problems” alleged by the plaintiffs, Exponent undertook an analysis of three databases—two from Whirlpool and one from Sears—containing records of contacts and claims for the Whirlpool front-load washers identified in the litigation (“Subject Washers”).¹ The records of these contacts and claims were analyzed for possible concerns with mold-mildew growth in the machine, or moldy or mildewy odors in the machine, in the home, or in laundry washed in the machine, as reported either by the product owners or by service technicians who inspected the machines.

In his report, Dr. Wilson opined that the Subject Washers “uniformly” fail to self-clean, develop a biofilm, and, “[w]ithin a matter of months and often only within a few weeks . . . produce an offensive odor.”² He also opined that the “pronounced foul odor . . . infiltrates the articles being washed and often the area surrounding the machine.”³ Dr. Griffin opined that in the same databases produced by Whirlpool and Sears (and analyzed by Exponent) nearly 49,000 washing machines built on Whirlpool’s Access or Horizon front-loading washer platform had a contact or request for service that possibly related to “problems with smell and growth of biofilms, including mold and mildew.”⁴ Specifically, using the Whirlpool and Sears databases, Dr. Griffin counted 48,665 “unique washing machine units” with a potential “Mold Problem.”

I have recreated the counting analyses performed by Dr. Griffin and have identified several major errors that Dr. Griffin made that cause his counts, and any opinions based on them, to be unreliable. For example, although the subject washers in this litigation are Whirlpool-brand washers, Dr. Griffin has included Kenmore-brand washers in his counting. As a result, his counts are not tied to the facts of this litigation and are misleadingly high. Of the 48,665 records counted in Dr. Griffin’s affidavit, only a minority of these records are for Whirlpool-brand Access or Horizon washing machines. In reality, the number of unique Whirlpool-brand washing machines that are the subject of this litigation and that have a potential “Mold Problem” recorded in either Sears’ or Whirlpool’s databases is 15,459. This number was derived using the process described later and in my rebuttal expert report, and includes a more expansive list of keywords and a more extensive search strategy than was used by Dr. Griffin. If this search is further expanded to include the approximately 2,720,000 Whirlpool Duet, Duet HT, Duet Steam, Duet Sport, and Duet Sport HT washers shipped through the end of October

¹ The washers used in the analysis for this litigation are Duet, Duet HT, Duet Steam, Duet Sport, and Duet Sport HT front-loading automatic washers manufactured by Whirlpool and purchased for primarily personal, family or household purposes in the states of AZ, CA, FL, GA, IL, IN, MA, MD, MI, NC, NJ, NY, OH, and TX.

² Expert Report on Whirlpool Front-Load Washer, Nov. 16, 2009, Dr. R. Gary Wilson, page 8.

³ *Ibid.*, page 4.

⁴ Affidavit of David W. Griffin, Ph.D., Nov. 16, 2009, ¶ 2.

Technical Memorandum
December 2009

2008. (Dr. Griffin did not limit his analysis to washers in the 14 states named in the litigation), the number of unique Whirlpool-branded washers with potential “Mold Problems” recorded in the databases would increase to 23,401, which represents approximately 0.86% of the Whirlpool-branded washers shipped.

Exponent’s review of a sample of records indicates that a significant number of such records do not actually describe symptoms consistent with “Mold Problems” as alleged by Plaintiffs. For example, many of the washers counted by Dr. Griffin include reports of “burning” odor. Of the 15,459 unique washers with records of potential “Mold Problems” in the 14 MDL states, 1,058 actually indicate a “burning” odor unrelated to the potential “Mold Problems” as alleged by Plaintiffs, leaving 14,401 unique washers with records of potential “Mold Problems.” Consequently, Whirlpool’s and Sears’ records indicate that both Drs. Wilson and Griffin dramatically overstated the numbers of putative class members who have complained to Whirlpool or Sears about “Mold Problems.”

I have summarized, in the following discussions, the databases that were analyzed, the methods for identifying relevant records, and results of these analyses.

Exponent reviewed two databases from Whirlpool and one database from Sears to identify relevant records. Those databases are (1) Whirlpool Service Claims; (2) Whirlpool Customer Contacts (Siebel); and (3) Sears Service Orders and Repairs.

- (1) Whirlpool Service Claims: Whirlpool primarily receives service records from independent, third-party service providers in Whirlpool’s authorized service network. The majority of these service claims are warranty “claims” for reimbursement of repairs and service performed by third-party service providers within the initial warranty period. For Whirlpool-built front-loading washers, the initial parts and labor warranty covers the machine during the first year of use.
- (2) Whirlpool Customer Contacts (Siebel): Customer contact records were extracted from Whirlpool’s Siebel call center database. This database contains customer contact information from Whirlpool’s customer service center, known as the Customer eXperience Center (“CXC”). Customer service representatives at the CXC manually enter customer data and contact details from product owners who contact Whirlpool, by telephone or e-mail, regarding Whirlpool-manufactured products, including product complaints and contacts to request repairs, product exchanges, full or partial reimbursement of the purchase price of a product, and parts ordering transactions. Some contacts result in repairs under warranty; thus, a washer could have a record in both Siebel and Whirlpool Service Claims for a specific issue.
- (3) Sears Service Orders and Repair Records: Sears sells Whirlpool-manufactured washers under the Whirlpool brand and under Sears’ own brand, Kenmore. This analysis includes only washers sold with the Whirlpool logo.⁵ Sears’ database

⁵ Washers sold under the Kenmore brand are not included in this litigation.

**Technical Memorandum
December 2009**

contains multiple data tables that identify the unique customer data, the customer's serviceable merchandise (*e.g.*, laundry appliances), the customer's service contracts (if the customer chose to buy an extended service plan (ESP)), any service orders created when a customer calls or e-mails the Sears call center to complain about a product or to request service, and completed repair service records. Because Sears sells "Master Protection Agreements," both in retail stores and through direct marketing activities, when a customer chooses to buy one of these extended service plans (ESPs), service calls or concerns beyond the first year of life of these washers (*i.e.*, outside the initial warranty period) are captured in Sears' database.

Coding Process

Exponent read and coded Whirlpool's and Sears' individual service and customer contact records in the following steps:

1. Identify Subject washers that may have a "Mold Problem" as alleged by Plaintiffs, and that would be included in one of the proposed MDL states. (The MDL actions seek trial certification of 14 statewide classes.) Within this group of washers, further identify "clothing/laundry" related. In a separate analysis, identify records of Preventative Maintenance service visits ("PM Checks") for Subject washers.
2. Read and code customer contact and service records for certain characteristics. Similarly, read and code all of the PM Check records.
3. Identify duplicate washers, *i.e.*, washers appearing in multiple databases or multiple times within a single database that may have had a reported "Mold Problem" as alleged by Plaintiffs.
4. Identify odor concerns unrelated to mold (*e.g.*, burning or smoky odors).

Step 1. Identify Subject Washers and relevant records

The Subject Washers are Whirlpool Duet, Duet HT, and Duet Steam front-loading washers (Access Platform) and Whirlpool Duet Sport and Duet Sport HT front-loading washers (Horizon Platform) sold in one or more of fourteen MDL states. Washer models were identified using the Material Number field in the Whirlpool databases, and by the Product Item Number field in the Sears databases. The Customer State fields in the Whirlpool and Sears databases were used to determine whether any given washer was in an MDL state.

Potentially relevant records were identified in two stages. In the first stage, potential "Mold Problems" as alleged by Plaintiffs were identified. In the second stage, records identified as possibly referring to "Mold Problems" were further searched for mention of clothing or laundry.

**Technical Memorandum
December 2009**

Records in the Whirlpool databases were searched using keyword searches of technician and customer comment fields. All comment fields in a file were searched. The keywords used in the searches for potential "Mold Problems" are listed in Attachment A. Wildcards were used in the searches so that variations of a word (such as "mold" and "moldy") would be identified. In addition to the keyword searches, the Whirlpool Service Claims database has a "Defect Condition" field with prescribed values, one of which is "Bad Odor." Records with Defect Condition coded as Bad Odor were also included.

Records in the Sears database were searched using keyword searches of the technician and customer comment fields. All comment fields in a file were searched. The same keywords used to search the Whirlpool databases (listed in Attachment A) were used to search the Sears databases.

After potentially relevant records in the Whirlpool and Sears databases were identified, these records were further searched to identify records that mention clothing or laundry. The keywords used in this search are identified in Attachment B. In this memorandum, the term "clothing" designates records identified by these keyword searches. The same comment fields used in the mold keyword searches were searched for these clothing keywords.

A separate analysis was performed for Preventative Maintenance service visits ("PM Checks"). PM Checks are a service offered by Sears free of charge to its customers who buy certain ESPs. These visits are identified as "PM CHECK" in the Sears "Job Code Type" field. Customers who purchase a Master Protection Agreement can request a free PM Check each year while their agreement is active. Records coded as PM CHECK in the Sears databases were identified for the Subject Washers. A separate file of PM CHECK records was prepared; this file contained records of 6,428 unique Subject Washers. The PM Check file was then analyzed for potential "Mold Problems" using the keywords listed in Attachment A.

Step 2. Read and code records for certain characteristics

The records identified as responsive to the "mold" and "clothing" search terms were individually read and coded for a variety of information. A copy of a sample coding screen is shown in Attachment C. The coders reviewed each record for certain criteria and then checked boxes adjacent to those criteria met by the record.

All of the records in the PM Check file were also individually read and coded using the same criteria.

Step 3. Identify duplicate washers

To identify unique washers within the Whirlpool databases (*i.e.*, to eliminate duplication resulting from more than one report for the same washer), the model number and serial number were used. For the Sears database, unique washers were identified by a combination of customer number and item number. The model and serial number combination was not used for Sears because serial numbers were not always present in Sears' records. Some washers appear in multiple databases. When a unique washer appeared multiple times, sometimes having a

Technical Memorandum
December 2009

particular criterion described, and sometimes not, that washer was flagged as having that particular criterion. Washers that appeared in both of Whirlpool's databases were counted only once. Washers that appeared in Sears' database were not compared to those in Whirlpool's databases because serial numbers were not often coded. Therefore, overall counts of unique washers will err on the side of over-counting.

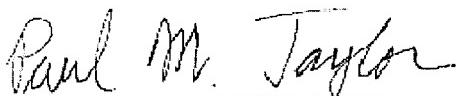
Step 4. Identify odor concerns unrelated to mold (burning or smoky odors)

Sometimes customers complain of a burning or smoky odor. The term "burn," as used in this memorandum, includes records discussing an odor akin to something burning or smoky. These types of odors could result, for example, from problems with an electrical board, pump, motor, or belt. A keyword search for burn or smoke odors was conducted on the records found in the first three steps using the keywords listed in Attachment D. These records were individually read. Only records that did not have any sort of potential biological issue were flagged as "burn."

Results:

The counts of unique washers meeting various criteria are presented in Attachments E and F. Attachment E reports our analyses for all of the records containing both an indication of a "Mold Problem" as alleged by Plaintiffs and that were identified using the "clothing" search criteria. Attachment F reports analyses for all PM Check claims containing an indication of a "Mold Problem" as alleged by Plaintiffs.

Prepared by:



Paul Taylor, Ph.D., P.E.

12/16/2009

Date

Technical Memorandum
December 2009

ATTACHMENT A - Keywords used in searches for “Mold Problems” as alleged by Plaintiffs

Keywords used to search for washing machines where customers or technicians mentioned odor, mold, or related words. The character “%” is a wildcard character, allowing for variations on the root word.

%BACTERIA%
%BIOLOG%
%CRUD %
%EGG%
%FILM%
%FOUL%
%FUNGI%
%FUNGUS%
%MICROB%
%MICROORG%
%MICRO-ORG%
%MILDEW%
%MOLD%
%MUSTY%
%ODOR%
%RESIDUE%
%ROTTEN%
%SCUM%
%SMELL%
%SOUR %
%STAGNANT%
%STALE%
%STENCH%
%STINK%
%SULPH%

Technical Memorandum
December 2009

ATTACHMENT B - Keywords used in Clothing-Related Searches

Keywords used to search for washing machines where customers or technicians mentioned clothing, laundry, or related words. The character “%” is a wildcard character, allowing for variations on the root word.

%GARMENT%

%CLOTH%

%LAUNDRY%

%TOWEL%

%SHIRT%

%PANT%

%BLOUSE%

%SHEET%

Technical Memorandum
December 2009

ATTACHMENT C- Coding Screen

Unit ID:	1291	<input checked="" type="checkbox"/> Any Odor Mentioned?	Source:	WHR_Siebel	Coder:
Customer Comments: Customer Mentioned Odor: <input checked="" type="checkbox"/> Phone Contact <input type="checkbox"/> During Service Visit <input type="checkbox"/> Unknown Customer Mentioned Mold/Mildew/Residue <input type="checkbox"/> Phone Contact <input type="checkbox"/> During Service Visit <input type="checkbox"/> Unknown <input type="checkbox"/> Found Mold/Mildew/Residue on Door Seal/bellows <input type="checkbox"/> Mention of Other Issue (non-odor) <input type="checkbox"/> Clothes Stained by washer (black spots)			Technician Comments: <input type="checkbox"/> Mention of Odor even though customer did not mention <input type="checkbox"/> Tech told cust about odor <input type="checkbox"/> Mention of Mold/Mildew/Residue <input type="checkbox"/> Mention of Other Issue (non-odor) <input type="checkbox"/> Found Mold/Mildew/Residue on Door Seal/bellows <input type="checkbox"/> Found Mold/Mildew/Residue on Other Washer Parts <input type="checkbox"/> Mold/Mildew in Laundry room (walls, etc) <input type="checkbox"/> Tech observed standing water or other mold-causing condition observed in laundry area		
Odor in Clothes: <input checked="" type="checkbox"/> Customer mentions clothes odor <input type="checkbox"/> Tech detects clothes odor			Odor in Laundry Room/ House: <input type="checkbox"/> Customer mentions laundry room smell <input type="checkbox"/> Tech detects laundry room odor <input type="checkbox"/> Laundry room odor reaches other rooms in house		
Washer Maintenance and Proper Use					
HE detergent: Customer states is regularly using HE -> <input type="checkbox"/> Customer not using HE			Affresh/ Bleach: <input type="checkbox"/> Before Service <input type="checkbox"/> During Service <input type="checkbox"/> Unknown <input type="checkbox"/> Customer not using Affresh, bleach or similar product <input type="checkbox"/> Customer instructed to use Affresh, bleach or similar		
Clean Cycle: <input type="checkbox"/> Customer not using Clean Cycle <input type="checkbox"/> Customer instructed to use clean cycle			Door Open: <input type="checkbox"/> Customer not leaving door open <input type="checkbox"/> Customer instructed to leave door open		
General Tech Instruc <input type="checkbox"/> Customer instructed in general procedures to eliminate odor/mold					
C O N T A C T	SR Title: odor with towels SVC Request Desc: NULL SVC Request Summary: n/a Tech SVC performed: n/a Defect Condition: n/a Defect Component: n/a				

Sample Image of Coding Screen

Technical Memorandum
December 2009

ATTACHMENT D - Keywords used in Burn-Related Searches

Keywords used to search for washing machines where customers or technicians mentioned burn or smoke or related words. The character “%” is a wildcard character, allowing for variations on the root word.

%SMOK%
%BURN%
%DIESEL%

Technical Memorandum
December 2009

ATTACHMENT E – Summary of Mold and Clothing Analyses

Description	Counts
Total Count of Unique Washers with "Mold" and "Clothing" Keywords	3085
For Unique Washers with both "Mold" and "Clothing" keywords	
Customer mentioned Mold/Mildew/Residue before service (over phone):	1147
Customer mentioned Mold/Mildew/Residue during service:	30
Customer mentioned Mold/Mildew/Residue, but unknown if mentioned before or during service	98
Customer mentioned other issue (non-odor)	651
Technician mentioned other issue (non-odor)	278
Customer mentioned mold/mildew/residue on door seal/bellows	556
Technician found mold/mildew/residue on door seal/bellows	69
Customer mentions clothes stained by washer (black spots)	154
Technician mentioned mold/mildew/residue	116
Technician found mold/mildew/residue on other washer parts	53
Technician observed mold/mildew in laundry room (walls, etc.)	3
Technician observed standing water or other mold-causing condition in laundry room	8
Washer had a drainage problem	109
Washer caused flooding	54
Washer door was stuck or locked (customer could not remove clothes)	28
Customer states is regularly using HE detergent prior to service (over phone)	359
Customer states is regularly using HE detergent during service	17
Customer states is regularly using HE detergent -- unknown if before or during service	197
Customer is not using HE detergent	206
Customer states is NOT using a Clean Washer cycle	16
Customer instructed to use a Clean Cycle	396
Customer states is NOT using Affresh, bleach or similar product	34
Customer instructed to use Affresh, bleach or similar product	1040
Customer states is NOT leaving washer door open after use	100
Customer instructed to leave washer door open after use	462
Analysis for Odors related to Burn or Smoky	
Total Count of Unique Washers with "Mold" and "Clothing" Keywords	3085
Was Odor Mentioned at all?	2484
Odors Mentioned that are not Burn or Smoky odors	2385
For Non-Burn Odor Related Washers (2385 count)	
Customer mentioned odor before service (over phone):	1848
Customer mentioned odor during service	97
Customer mentioned odor, but unknown if mentioned before or during service	125
Customer mentioned odor in clothes	1404
Technician mentioned odor in clothes	95
Technician mentioned odor even though customer did not mention	93
Technician told Customer about odor	6
Customer mentioned laundry room smell	95
Technician mentioned laundry room smell	3
Is the odor from washer reaching other rooms in the house? (customer or tech)	22

Technical Memorandum
December 2009

ATTACHMENT F – Summary of PM Check Analyses

Description	Counts
Total Count of Unique Washers with a PM Check and "Mold" Keywords	156
For Unique Washers with a PM Check and a Mold keyword	
Customer mentioned Mold/Mildew/Residue before service (over phone):	0
Customer mentioned Mold/Mildew/Residue during service:	0
Customer mentioned Mold/Mildew/Residue, but unknown if mentioned before or during service	24
Customer mentioned other issue (non-odor)	0
Technician mentioned other issue (non-odor)	32
Customer mentioned mold/mildew/residue on door seal/bellows	2
Technician found mold/mildew/residue on door seal/bellows	20
Customer mentions clothes stained by washer (black spots)	1
Technician mentioned mold/mildew/residue	48
Technician found mold/mildew/residue on other washer parts	16
Technician observed mold/mildew in laundry room (walls, etc.)	0
Technician observed standing water or other mold-causing condition in laundry room	5
Washer had a drainage problem	3
Washer caused flooding	0
Washer door was stuck or locked (customer could not remove clothes)	0
Customer states is regularly using HE detergent prior to service (over phone)	1
Customer states is regularly using HE detergent during service	0
Customer states is regularly using HE detergent -- unknown if before or during service	0
Customer is not using HE detergent	3
Customer states is NOT using a Clean Washer cycle	0
Customer instructed to use a Clean Cycle	2
Customer states is NOT using Affresh, bleach or similar product	1
Customer instructed to use Affresh, bleach or similar product	37
Customer states is NOT leaving washer door open after use	1
Customer instructed to leave washer door open after use	6
Customer instructed in general procedures to eliminate odor or mold	51
Analysis for Odors related to Burn or Smoky	
Total Count of Unique Washers with a PM Check and "Mold" Keywords	156
Was Odor Mentioned at all?	121
Unique Washers with a non-Burn or Smoky Odor Having a PM Check	114
For Non-Burn Odor Related Washers Having a PM Check (114 count)	
Customer mentioned odor before service (over phone):	0
Customer mentioned odor during service	0
Customer mentioned odor, but unknown if mentioned before or during service	40
Customer mentioned odor in clothes	7
Technician mentioned odor in clothes	2
Technician mentioned odor even though customer did not mention	4
Technician told Customer about odor	0
Customer mentioned laundry room smell	0
Technician mentioned laundry room smell	1
Is the odor from washer reaching other rooms in the house? (customer or tech)	0